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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------------------|-------------|---------------------------|-----------------------|------------------|
| 09/674,274 | 01/24/2001 | Francoise Lartigue-Peyrou | 022701-895 | 5152 |
| 21839 | 7590 | 03/10/2004 | EXAMINER | |
| BURNS DOANE SWECKER & MATHIS L L P | | | ANTHONY, JOSEPH DAVID | |
| POST OFFICE BOX 1404 | | | ART UNIT | PAPER NUMBER |
| ALEXANDRIA, VA 22313-1404 | | | 1714 | |

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/674,274 | LARTIGUE-PEYROU, FRANCOIS |
| | Examiner | Art Unit |
| | Joseph D. Anthony | 1714 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 19-20 and 22-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 is indefinite because it lacks proper antecedent basis from claim 14 for the claimed nitroaromatic type derivative.

Claim 20 is indefinite because it lacks proper antecedent basis from claim 14 for the claimed newly added secondary polymerization inhibitor.

Claim 22 is indefinite because it lacks antecedent basis from 14 for the phrase "said ethylenically unsaturated aliphatic monomer".

Claim 22 is also indefinite because the "unsaturated resins" component are not ethylenically unsaturated aliphatic monomers.

Claim 23 is indefinite because "acrylated epoxy resins and polyethyleneglycol diacrylate" are not ethylenically unsaturated aliphatic monomer.

Claim 24 is rejected here because it is dependent on a rejected base claim and does not overcome the base claim's problem.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 10-11, 13-18, 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. U.S. Patent number 2,882,136.

Thompson et al teaches 1,3,5-tri(arylarnino)benzene and derivatives thereof as stabilizers for organic compositions that are subject to oxidative deterioration.

Applicant's claimed benzenetriamine derivatives of general formula (I) fall directly within Thompson et al's 1,3,5-tri(arylarnino)benzene and derivatives thereof, see column 1, line 57 to column 2, line 33. Thompson et al's 1,3,5-tri(arylarnino)benzene and derivatives thereof are disclosed to be effective stabilizers for such organic compositions as cottonseed oil, linseed oil etc., see column 2, lines 34-48. It is well known in the art that cottonseed oil and linseed oil, comprise both oleic acid and linoleic acid which are both ethylenically unsaturated monomers. Thompson et al's discloses the addition of inert organic solvents to facilitate the incorporation of the 1,3,5-tri(arylarnino)benzene and derivative stabilizers into organic compositions that are subject to oxidative deterioration. Specifically disclosed inert solvents are benzene and toluene, see column 2, line 66 to column 3, line 7. Thompson et al's disclosed stabilizer

concentration range directly overlaps applicant's disclosed concentration range,
see column 2, lines 58-65.

Thompson et al differs from applicant's claimed invention in that there is no direct teaching (i.e. by way of an example) to where a 1,3,5-tri(aryl amino)benzene and/or its derivative stabilizers is/are actually used to stabilize organic compositions that contain ethylenically unsaturated monomers. There is also no direct teaching (i.e. by way of an example) to the use of mixtures of different 1,3,5-tri(aryl amino)benzene and its derivatives thereof as stabilizers for organic compositions that contain ethylenically unsaturated monomers.

It would have been obvious to one having ordinary skill in the art to use the broad disclosure of Thompson et al as strong motivation to actually add a 1,3,5-tri(aryl amino)benzene and/or its derivative stabilizers to an organic compositions that contain ethylenically unsaturated monomers in order to stabilize said monomers. Thompson broad disclose also make clear that combinations of 1,3,5-tri(aryl amino)benzene and its derivatives may be used to stablize organic compositions that are subject to oxidative deterioration.

5. Claims 7-9, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. U.S. Patent number 2,882,136 in view of Butler et al. U.S. Patent Number 4,466,905.

Thompson et al has been described above and further differs from applicant's claimed invention in that: 1) there is no direct disclosure to the further addition of

a secondary stabilizer selected from at least one nitroaromatic derivative., and 2) there is no direct disclosure to where the organic compositions that are subject to oxidative deterioration and are to be stabilized by 1,3,5-tri(aryl amino)benzene and its derivatives are vinylaromatic monomers.

It would have been obvious to one having ordinary skill in the art to use the direct teaching of Butler et al that 2,6-dinitro-p-cresol is a known effective polymerization inhibitor of vinylaromatic monomers (see abstract), as motivation to actually added 2,6-dinitro-p-cresol as an additional stabilizer to be used in combination with 1,3,5-tri(aryl amino)benzene and its derivatives to stabilize organic compositions that are subject to oxidative deterioration, such as vinylaromatic type compositions.

6. Claims 12 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. U.S. Patent number 2,882,136 in view of anyone of: Amano et al. U.S. Patent Number 5,064,917 or Ritter et al. U.S. Patent Number 5,30,877 or Kimble U.S. Patent Number 4,292,042.

Thompson et al has been described above and further differs from applicant's claimed invention in that: 1) there is no direct disclosure to the further addition of a secondary stabilizer selected from applicant's claimed stabilizers of claim 12., and 2) there is no direct disclosure to where the organic compositions that are subject to oxidative deterioration and are to be stabilized by 1,3,5-

tri(aryl amino)benzene and its derivatives are ethylenically unsaturated aliphatic monomers of the species set forth in applicant's claims 23-24.

Amano et al teaches that it is well known to use hydroquinone and/or p-methoxyphenol as polymerization inhibitors for vinyl chloride monomers, see column 4, lines 9-15.

Ritter et al teaches that it is well known in the art to use p-methoxyphenol as a polymerization inhibitor for (meth)acrylic acid monomers, see column 3 lines 1-19.

Kimble teaches that it is well known in the art to use hydroquinone as an effective polymerization stabilizer for vinyl acetate monomers, see column 2, lines 8-14.

It would have been obvious to one having ordinary skill in the art to use the direct teaching of Amino et al., or Ritter et al., or Kimble to polymerization inhibitors that read on those claimed by applicant in claim 12, as motivation to actually added at least one of these said polymerization inhibitors as an additional stabilizer to be used in combination with 1,3,5-tri(aryl amino)benzene and its derivatives to stabilize organic compositions that are subject to oxidative deterioration, such vinyl chloride or (meth)acrylic acid or vinyl acetate.

Prior-Art Cited But Not Applied

7. Any prior-art reference which is cited on FORM PTO-892 but not applied, is cited only to show the general state of the prior-art at the time of applicant's invention.

Examiner Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (571) 272-1117. This examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 6:30 p.m. in the eastern time zone. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (571) 272-1119. The centralized FAX machine number is (703) 872-9306. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner.



**Joseph D. Anthony
Primary Patent Examiner
Art Unit 1714**

